

APPENDIX A.
CACHE CREEK, BEAR CREEK, AND HARLEY GULCH TMDL FOR
MERCURY STAFF REPORT

This report is available at
<http://www.waterboards.ca.gov/centralvalley/programs/tmdl/Cache-SulpherCreek/index.html>.

APPENDIX B.
SULPHUR CREEK TMDL FOR MERCURY STAFF REPORT

This report is available at

<http://www.waterboards.ca.gov/centralvalley/programs/tmdl/Cache-SulpherCreek/index.html>.

APPENDIX C. ANDERSON MARSH METHYLMERCURY SAMPLES

Anderson Marsh State Historic Park is located at the outlet of Clear Lake and three miles upstream from the Clear Lake Dam. The 1,000-acre park contains oak woodlands, cottonwood lined riparian areas, and a tule wetland. Regional Board staff is currently collecting water quality samples to determine if the wetland methylates mercury that results in high methylmercury concentrations at the Clear Lake Dam. Figure C-1 shows Regional Board sampling sites and Table C-1 lists methylmercury samples collected.

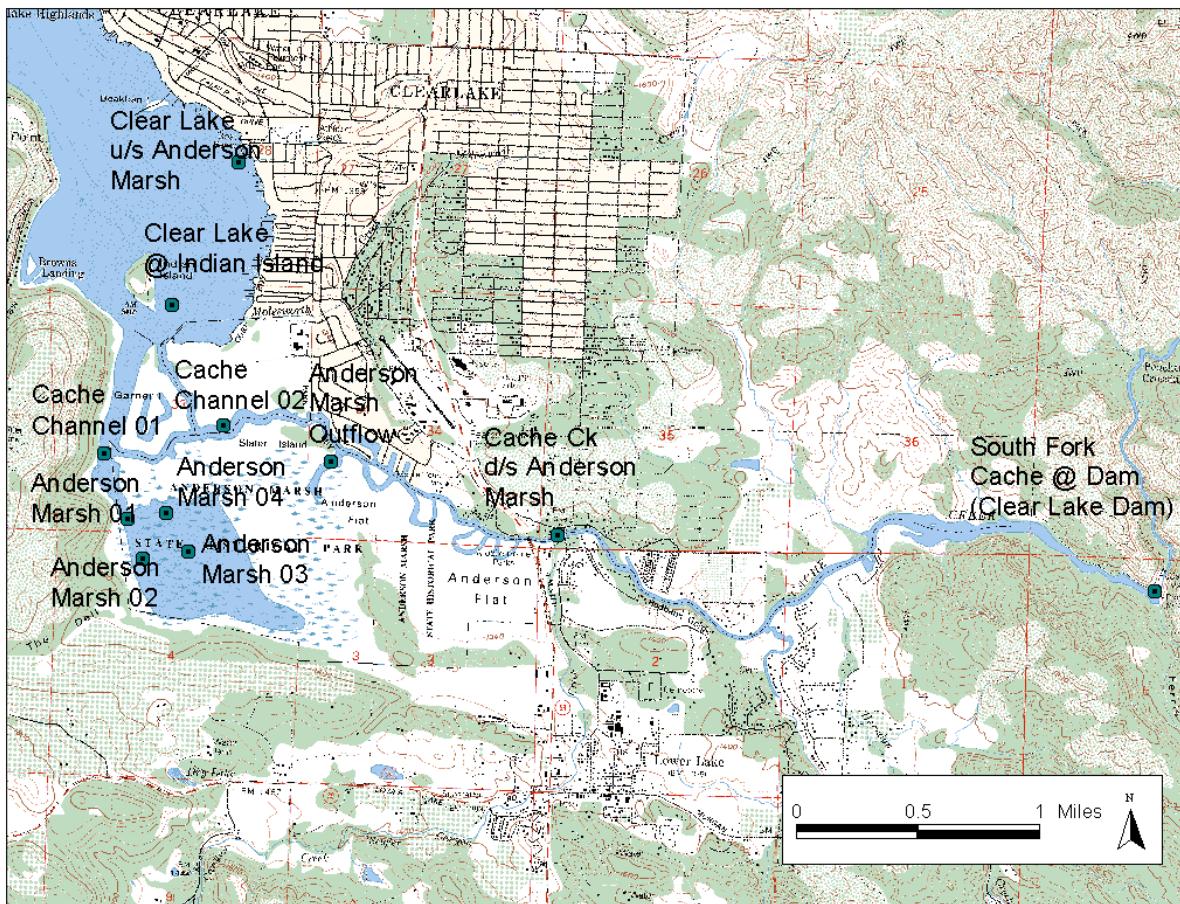


Figure C-1. Anderson Marsh Sample Sites

Table C-1. Anderson Marsh Methylmercury Samples

Site Name	Latitude	Longitude	Methylmercury Concentrations (ng/L)			
			06/09/04	08/03/04	08/25/04	09/22/04
Clear Lake u/s Anderson Marsh	38.94724	122.63626	0.046	0.18	0.08	0.06
Clear Lake at Indian Island	38.93814	122.64242			0.08	
Cache Channel 01	38.92969	122.64656			0.12	
Cache Channel 02	38.93161	122.63692			0.09	0.10
Anderson Marsh 01	38.92581	122.64531			0.12	
Anderson Marsh 02	38.92389	122.64367			0.15	
Anderson Marsh 03	38.92436	122.64033			0.18	
Anderson Marsh 04	38.92622	122.64244			0.19	
Anderson Marsh Outflow	38.92914	122.63036			0.41	0.45
Cache Creek d/s Anderson Marsh ^a	38.92550	122.61163	0.22	0.25	0.18	0.10
South Fork Cache Ck at Dam (Clear Lake Dam)	38.92328	122.56553	0.23	0.34	0.16	0.10

(a) Cache Creek d/s Anderson Marsh sample was collected upstream of the regular site at 38.92656 and 122.62056 on August 25, 2004

Appendix D. Survey of Mercury in Sediment of Cache Creek Canyon

Site Code	Site Name	Latitude	Longitude	Sediment Concentration (ppm)		
				Fine (<63 um)	Medium (63 um – 1 mm)	Coarse (1 – 2.8 mm)
NF04	North Fork Cache Ck u/s Wolf Creek	39.06953	-122.58406	0.1	0.131	0.134
WC	Wolf Creek	39.06911	-122.58528	0.0	0.018	0.159
LV	Long Valley Creek	39.04822	-122.58072	0.0	<0.011 (ND)	<0.011 (ND)
HH	Hog Hollow Creek	39.02694	-122.57739	0.1	0.021	0.018
SH	Sweet Hollow Creek	39.01786	-122.57186	0.1	0.029	0.049
NF03	North Fork Cache Ck d/s Grizzly Creek	38.98767	-122.53883	0.0	0.069	0.088
NF02	North Fork Cache Ck	38.98447	-122.51469	0.0	0.022	0.125
NF01	North Fork Cache u/s South Fork Confluence	38.98097	-122.50511	0.0	0.032	0.028
SF	South Fork Cache u/s North Fork Confluence	38.98000	-122.50344	0.1	0.044	
CC01	Mainstem Cache Creek 1	38.98372	-122.49419	0.0	0.584	0.05
CC02	Mainstem Cache Creek 2 (u/s Stemple Ck)	38.98531	-122.48386	0.0	0.034	0.027
CC03	Mainstem Cache Creek 3 (d/s Stemple Ck)	38.98800	-122.48361	0.1	0.041	0.059
CC04	Mainstem Cache Creek 4 (Between Judge & Jack)	38.96483	-122.46717	1.25	0.82	0.71
CC05	Mainstem Cache Creek 5 (Between Judge & Jack)	38.96381	-122.46778	0.45	1.43	0.40
CC06	Mainstem Cache Creek 6 (Upper sandbar u/s Judge)	38.96164	-122.46192	0.50	0.54	0.46
CC07	Mainstem Cache Creek 7 (Sandbar u/s Judge)	38.96131	-122.45989	0.29	0.64	0.26
BR01	Brushy Ck at mouth	38.96072	-122.45642	0.05	0.24	0.15
BR02	Brushy Ck upstream	38.96056	-122.45603	0.03	0.25	0.13
JD01	Judge Davis Ck at mouth	38.96183	-122.45933	0.61	0.19	0.13
JD02	Judge Davis Ck upstream	38.96225	-122.45939	0.10	0.17	0.42
CC08	Mainstem Cache Creek 8	38.94601	-122.44547	0.86	1.12	1.44
CC09	Mainstem Cache Creek 9	38.94607	-122.44527	1.75	2.09	2.69
CC10	Mainstem Cache Creek 10	38.94564	-122.44463	0.75	0.52	0.15
CC11	Mainstem Cache Creek 11	38.94316	-122.44029	0.16	0.24	0.27
CC12	Mainstem Cache Creek 12	38.94309	-122.44003	1.45	1.16	2.84
CC13	Mainstem Cache Creek 13	38.94285	-122.43841	0.33	0.67	0.31
CC14	Mainstem Cache Creek 14	38.94410	-122.43597	0.47	1.23	4.75
CC15	Mainstem Cache Creek 15	38.94448	-122.43566	1.17	0.23	0.61
CC16	Mainstem Cache Creek 16	38.94458	-122.43393	0.52	0.29	0.30
CC17	Mainstem Cache Creek 17 (Kennedy Flat)	38.94753	-122.41992	0.48	0.49	0.75
CC18	Mainstem Cache Creek 18 (Kennedy Flat)	38.94797	-122.41975	0.49	0.67	0.44
CC19	Mainstem Cache Creek 19 (Kennedy Flat)	38.94822	-122.41947	0.34	0.74	0.41
CC20	Mainstem Cache Creek 20	38.94567	-122.41578	1.01	3.34	0.46
CC21	Mainstem Cache Creek 21	38.94531	-122.41611	3.58	0.76	0.93
CC22	Mainstem Cache Creek 22	38.94497	-122.41528	0.46	0.34	0.32
CR01	Crack Canyon	38.94194	-122.40981	0.18	0.28	0.27
CR02	Crack Canyon	38.94175	-122.40961	0.15	0.37	0.40
CR03	Crack Canyon	38.94175	-122.40975	0.23	0.56	0.43
CC23	Mainstem Cache Creek 23	38.93994	-122.39439	1.11	0.33	0.29
CC24	Mainstem Cache Creek 24	38.93983	-122.39417	0.88	0.45	
CC25	Mainstem Cache Creek 25	38.93969	-122.39344	0.36	0.46	0.46
CC26	Mainstem Cache Creek 26	38.94381	-122.39042	0.25	0.41	0.30
CC27	Mainstem Cache Creek 27	38.94381	-122.39042	1.56	0.38	0.41

Site Code	Site Name	Latitude	Longitude	Sediment Concentration (ppm)		
				Fine (<63 um)	Medium (63 um – 1 mm)	Coarse (1 – 2.8 mm)
CC28	Mainstem Cache Creek 28	38.94414	-122.39078	0.82	0.42	0.35
CC29	Mainstem Cache Creek 29 (u/s Davis Creek)	38.94067	-122.38547	0.68	0.70	0.46
CC30	Mainstem Cache Creek 30 (u/s Davis Creek)	38.94047	-122.38514	0.38	0.40	0.29
CC31	Mainstem Cache Creek 31 (u/s Davis Creek)	38.94033	-122.38456	1.19	1.11	0.47
DC01	Davis Creek 1	38.93061	-122.37800	0.14	0.44	0.30
DC02	Davis Creek 2	38.93050	-122.37811	1.70	0.46	0.33
DC03	Davis Creek 3	38.93044	-122.37819	0.14	1.61	0.38
CC32	Mainstem Cache Creek 32 (d/s Davis Creek)	38.93056	-122.37040	1.15	1.77	1.06
CC33	Mainstem Cache Creek 33 (d/s Davis Creek)	38.92441	-122.37208	0.23	1.04	1.33
CC34	Mainstem Cache Creek 34 (d/s Davis Creek)	38.92454	-122.37073	0.17	1.27	1.50
CC35	Mainstem Cache Creek 35	38.92458	-122.36916	0.92	1.27	3.76
CC36	Mainstem Cache Creek 36	38.92268	-122.36421	0.49	1.53	2.52
CC37	Mainstem Cache Creek 37	38.92184	-122.36396	0.75	2.13	2.05
CC38	Mainstem Cache Creek 38	38.92077	-122.36266	0.33	2.16	0.21
CC39	Mainstem Cache Creek 39	38.91951	-122.35356	4.56	1.92	0.27
CC40	Mainstem Cache Creek 40	38.91845	-122.34826	0.27	1.23	1.56
CC41	Mainstem Cache Creek 41	38.93042	-122.37029	11.20	1.28	2.21
CC42	Mainstem Cache Creek 42	38.92987	-122.36993	0.30	1.18	2.00
CC43	Mainstem Cache Creek 43	38.92632	-122.37333	10.05	1.86	0.71
CC44	Mainstem Cache Creek 44	38.92619	-122.37373	0.32	2.20	1.69
CC45	Mainstem Cache Creek 45	38.92581	-122.37429	1.73	2.79	4.20

Appendix E. Calculation of Alternative 3 Water Quality Objectives

The following text details the calculation of the water quality objectives proposed in Alternative 3, which are based on the USEPA's Recommended Water Quality Criterion for Methylmercury for the Protection of Human Health (0.15 and 0.3 mg/kg, wet weight in Trophic Level 3 and 4 fish, respectively) for Cache Creek and Bear Creeks. Additional information on the development of fish tissue criteria is available in Section 2 of the Cache Creek, Bear Creek, and Harley Gulch TMDL for Mercury (Appendix A).

Alternative 3 proposes a water quality objective equivalent to USEPA's Recommended Water Quality Criterion for Methylmercury for Cache Creek and Bear Creek. To protect human health, the USEPA recommends an ambient water quality criterion for methylmercury of 0.3 mg/kg methylmercury in fish tissue, on a wet weight basis (USEPA, 2001a). The USEPA criterion represents the concentration in fish tissue that should not be exceeded based on a total consumption of locally caught fish of 17.5 g/day¹. A level of 17.5 g/day is the consumption rate reported by the 90th percentile of participants in a 1994-96 nation-wide food survey conducted by the U.S. Department of Agriculture (including people who do not eat fish). The 17.5 g/day rate originated from the sum of particular amounts of fish from trophic levels 2, 3, and 4.

Other variables incorporated into the USEPA recommended criterion are an acceptable daily intake level of methylmercury (reference dose; RfD) of 0.1 micrograms/kg body weight/day and a standard adult body weight of 70 kg (NRC, 2000; USEPA, 2001a). The USEPA published this reference dose along with the recommended criterion in 2001. The reference dose was fully supported in an analysis of methylmercury data conducted by the National Research Council at the request of the U.S. Congress (NRC, 2000).

The USEPA criterion assumes consumers eat 12.5 g/day of fish obtained from commercial sources, in addition to the locally caught fish. USEPA estimates that the average methylmercury intake from eating 12.5g/day of commercial fish (mainly marine species) is 0.027 micrograms/kg bwt/day. The estimated intake of methylmercury from other sources, such as drinking water, other foods and air, is negligible (USEPA, 2001a). In order to calculate the fish tissue criterion for locally caught fish, the methylmercury dose from commercial fish was subtracted from the reference dose.

The USEPA recently published a recommended water quality criterion for the protection of human health (USEPA, 2001b). Variables incorporated into the USEPA recommended criterion are an acceptable daily intake level of methylmercury (reference dose; RfD) of 0.1 micrograms/kg body weight/day and a standard adult body weight of 70 kg. The USEPA published this reference dose along with the recommended criterion. The reference dose was fully supported in an analysis of methylmercury data conducted by the National Research Council at the request of the U.S. Congress (NRC, 2000).

The following equation was used for calculation of USEPA's recommended fish-tissue based methylmercury water quality criterion (USEPA, 2001b):

¹ 17.5 g/day is equivalent to one eight-ounce meal per 2-week period, or four ounces per week (2.3 meals/month). 12.5 g/day is equivalent to 1.7 eight-ounce meals per month.

Equation 1

$$\frac{(\text{RfD} - \text{intake from other sources}) * \text{body weight}}{(\text{CR}_{\text{TL2}*} + \text{CR}_{\text{TL3}} + \text{CR}_{\text{TL4}})} = \text{Acceptable level of mercury in fish}$$

Where: RfD = reference dose for humans, representing the safe, total daily intake of methylmercury (0.1 micrograms/kg body weight per day).

Intake from other sources = average intake of methylmercury from marine fish by adults in the general population, as reported in the USDA 1994-96 nationally based Continuing Survey of Food Intake for Individuals (CSFII). The average intake from marine fish is 0.027 micrograms/kg bodyweight per day. (USEPA, 2000b). Other sources of methylmercury such as drinking water provide negligible quantities (USEPA, 2001b).

CR_{TL2} = consumption rate of fish from Trophic Level 2 (3.8 g/day)

CR_{TL3} = consumption rate of fish from Trophic Level 3 (8.0 g/day)

CR_{TL4} = consumption rate of fish from Trophic Level 4 (5.7 g/day)

The total of these consumption rates, 17.5 g/day, is the 90th percentile consumption rate reported in the USDA 1994-96 CFSII. This was a nationwide survey of the general population of the United States. Consumption rate data include people who do not eat fish or shellfish (USEPA, 2000b).

Application of USEPA's reference dose and default consumption rates to the above equation:

$$\frac{(0.10 \mu\text{g}/\text{kg day} - 0.027 \mu\text{g}/\text{kg day}) * 70 \text{ kg}}{(3.8 \text{ g}/\text{day} + 8.0 \text{ g}/\text{day} + 5.7 \text{ g}/\text{day})} = 0.3 \mu\text{g} \text{ methylmercury/g fish tissue}$$

Note: 0.3 μg/g fish tissue is equivalent to 0.3 mg/kg.

The initial USEPA methylmercury criteria report did not describe how the criterion should be applied to fish species with different concentrations of methylmercury. The USEPA recommends, however, that the criterion be applied using information about local consumption. Most of the fish caught and kept from Cache or Bear Creeks will be trophic level 4 fish, such as catfish, bullhead, pike minnow, and bass. Some trophic level 3 species, such as bluegill, may also be caught and kept for consumption (CDFA, 2004b; observations by Regional Water Board staff). Humans are unlikely to consume trophic level 2 fish from Cache or Bear Creeks. A logical way to interpret the USEPA criterion for Cache and Bear Creeks, then, is to assign the criterion of 0.3 mg/kg as the average concentration of methylmercury in locally caught trophic level 4 fish. This interpretation still assumes a consumption rate of 17.5 g/day, but accounts for the local situation that most fish consumed are trophic level 4 species.

Although the USEPA fish tissue criterion is applied to trophic level 4 fish in Cache and Bear Creeks, a corresponding safe level in trophic level 3 fish can be calculated using the existing ratio of methylmercury concentrations in large, trophic level 4 and trophic level 3 fish. The existing ratio between methylmercury concentrations in similarly sized trophic level 4 and trophic level 3 fish is 2.0 (See Cache Creek TDML report for current fish data).

Equation 2

$$\frac{\text{Trophic level 4 objective}}{\text{Trophic Level 4/3 ratio}} = \text{trophic level 3 objective}$$

Applying the site-specific trophic level ratio in this equation produces a safe methylmercury level in trophic level 3 fish of 0.15 mg/kg.

$$\frac{0.3 \text{ mg/kg}}{2.0} = 0.15 \text{ mg/kg}$$

The Equation 2 calculations produce water quality objectives proposed under Alternative 3 that are the following:

**0.3 mg methylmercury/kg fish muscle tissue, wet weight in Trophic Level 4 fish,
0.15 mg methylmercury/kg fish muscle tissue, wet weight in Trophic Level 3 fish.**

These proposed concentrations are the average methylmercury concentrations in fillet of TL3 fish in the range 150-350 mm total length and TL4 fish in the range of 150-500 mm total length.

APPENDIX F. RECOMMENDED FORMAT FOR COMMENT LETTERS

Comment letters to the Regional Board on staff recommendations serve two purposes: 1) to point out areas of agreement; and 2) to suggest revisions to staff recommendations. Clear statements of both areas of agreement and suggested revisions will assist the Regional Board and staff in understanding the recommendations of the commenter. In order to aid staff in identifying suggested revisions and to respond to the specific issues raised by the commenter, the following format for comment letters is suggested:

Format for Comments Suggesting Revisions

The suggested format is to number the comment, state in one sentence the topic upon which the comment is directed, provide a supporting argument, and make a specific recommendation. Supporting arguments should include citations, where appropriate.

The recommended format is below.

Comment #. One sentence description or title for the comment

Suggested revision to the Basin Plan Amendment language or staff report. For suggested revisions to the Basin Plan Amendment language please use underline/strikeout to show changes from the staff proposal. For suggested changes to the staff report, please clearly indicate the section(s) being addressed. The discussion related to the suggested revisions should be clearly supported by reference to applicable law or scientific or technical reports, where appropriate.

Format for Comments Supporting Staff Recommendations

If the commenter concurs with a staff recommendation, a statement to that effect will assist the Regional Board in determining what action, if any, to take on the staff recommendation. In general, no supporting discussion need be presented, unless the commenter feels that the staff recommendation could be further enhanced or clarified. The recommended format is below.

Comment #. One sentence description or title for the comment.

The provision(s) of the proposed Basin Plan Amendment that the commenter supports should be clearly stated. The commenter may want to provide their reason for supporting the provision of the proposed Basin Plan Amendment, especially if it differs from the staff rationale. Additional legal or scientific citations can also be provided.

Appendix G. Methylmercury Data

References

- Foe & Croyle** Foe, C. and W. Croyle. 1998. *Mercury Concentrations and Loads from the Sacramento River and from Cache Creek to the Sacramento-San Joaquin Delta Estuary*. California Regional Water Quality Control Board, Central Valley Region. Sacramento, CA. Staff report. June 1998.
- CVRWQCB** Sampling conducted by Sacramento River Mercury TMDL Staff in 2002
- CALFED1C** Domalgalski, J. and C. Alpers. 2001. *Mercury Loads to the Sacramento-San Joaquin Delta from the Cache Creek Watershed and the Yolo Bypass*. Draft Calfed Report. Subtask 1C.
- CALFED5A** Suchanek, T.H., D.G. Slotton, D.C. Nelson, S.M. Ayers, C. MacDonald, R. Weyand, A. Liston, B. Cohn, K. McElroy, P. King. 2001. *Source bioavailability and Mine Remediation Feasibility in the Cache Creek Watershed*. Draft Calfed Report. Subtask 5A.
- USACE** Taken from USACE Lower Cache Creek, Yolo County, CA City of Woodland and Vicinity Flood Reduction Study March 30, 2001 <http://infotrek.er.usgs.gov/pls/nawqa.home>
- CALFED5B** Slotton, D.G., S.M. Ayers, T.H. Suchanek, R.D. Weyand, and A.M. Liston. 2002. *Mercury Bioaccumulation and Trophic Transfer in the Cache Creek Watershed, California, in Relation to Diverse Aqueous Mercury Exposure Conditions*. Draft Calfed Report. Subtask 5B.
- Yolo Co** Slotton, D.G., S.M. Ayers, and J.E. Reuter. 1996. Off-Channel Gravel Pit Lakes - Mercury Considerations. Lower Cache Creek, Yolo County, California. Preliminary Study, April 1996. Prepared for Yolo County. May 2, 1996.
- CCNP2** Slotton, D.G., S.M. Ayers. 2001. Cache Creek Nature Preserve Mercury Monitoring Program, Yolo County, Ca. Second Semi-Annual Data Report (Spring-Summer 2001). Prepared for Yolo County. November 20, 2001.
- CCNP4** Slotton, D.G., S.M. Ayers. 2001. Cache Creek Nature Preserve Mercury Monitoring Program, Yolo County, Ca. Fourth Semi-Annual Data Report (Spring-Summer 2001). Prepared for Yolo County. December 15, 2002.

<u>ProjID</u>	<u>Normalized Site Name</u>	<u>Date</u>	<u>TMeHg (ng/L)</u>
CALFED5B	Bear Ck (mid)	01/31/00	0.58
CALFED5B	Bear Ck (mid)	03/02/00	0.26
CALFED5B	Bear Ck (mid)	04/17/00	0.35
CALFED5B	Bear Ck (mid)	06/14/00	0.17
CALFED5B	Bear Ck (mid)	08/10/00	1.09
CALFED5B	Bear Ck (mid)	10/11/00	0.13
CALFED5B	Bear Ck (mid)	11/07/00	0.32
CALFED5B	Bear Ck (mid)	12/11/00	0.22
CALFED5B	Bear Ck (mid)	01/11/01	0.47
CALFED5B	Bear Ck (mid)	02/13/01	0.71
CALFED5B	Bear Ck (mid)	03/22/01	0.33
CALFED5B	Bear Ck (mid)	05/03/01	0.19
CALFED5B	Bear Ck (mid)	06/07/01	2.79
CALFED5B	Bear Ck (mid)	07/12/01	1.14
CALFED5B	Bear Ck (mid)	08/23/01	0.58
CVRWQCB	Bear Ck @ Bear Valley Rd	02/03/04	0.0811
CVRWQCB	Bear Ck @ Bear Valley Rd	02/17/04	0.185
CVRWQCB	Bear Ck @ Bear Valley Rd	03/24/04	0.0661
CVRWQCB	Bear Ck @ Bear Valley Rd	04/28/04	0.158
CVRWQCB	Bear Ck @ Bear Valley Rd	06/09/04	0.113
CVRWQCB	Bear Ck @ Bear Valley Rd	08/03/04	0.178
CVRWQCB	Bear Ck @ Bear Valley Rd	09/22/04	0.0657
CVRWQCB	Bear Ck @ Bear Valley Rd	10/26/04	0.0976
CVRWQCB	Bear Ck @ Bear Valley Rd	02/02/05	0.053
CVRWQCB	Bear Ck @ Brim Rd	02/03/04	0.0323
CVRWQCB	Bear Ck @ Brim Rd	02/17/04	0.131
CVRWQCB	Bear Ck @ Brim Rd	03/24/04	0.0481
CVRWQCB	Bear Ck @ Brim Rd	04/28/04	0.0878
CVRWQCB	Bear Ck @ Brim Rd	06/09/04	0.202
CVRWQCB	Bear Ck @ Brim Rd	08/03/04	0.213
CVRWQCB	Bear Ck @ Brim Rd	09/22/04	0.11
CVRWQCB	Bear Ck @ Brim Rd	10/26/04	0.0378
CVRWQCB	Bear Ck @ Brim Rd	12/01/04	0.0638
CVRWQCB	Bear Ck @ Holsten Canyon	02/03/04	0.23
CVRWQCB	Bear Ck @ Holsten Canyon	02/17/04	0.293
CVRWQCB	Bear Ck @ Holsten Canyon	03/24/04	0.228
CVRWQCB	Bear Ck @ Holsten Canyon	04/28/04	0.296
CVRWQCB	Bear Ck @ Holsten Canyon	06/09/04	0.755
CVRWQCB	Bear Ck @ Holsten Canyon	08/03/04	0.604
CVRWQCB	Bear Ck @ Holsten Canyon	09/22/04	0.016
CVRWQCB	Bear Ck @ Holsten Canyon	10/26/04	0.12
CALFED5B	Bear Ck @ Hwy 20	08/23/01	0.81
CVRWQCB	Bear Ck @ Hwy 20	02/03/04	0.197
CVRWQCB	Bear Ck @ Hwy 20	02/17/04	0.457
CVRWQCB	Bear Ck @ Hwy 20	03/24/04	0.212
CVRWQCB	Bear Ck @ Hwy 20	04/28/04	0.405
CVRWQCB	Bear Ck @ Hwy 20	06/09/04	0.882
CVRWQCB	Bear Ck @ Hwy 20	08/03/04	0.109
CVRWQCB	Bear Ck @ Hwy 20	09/22/04	0.115
CVRWQCB	Bear Ck @ Hwy 20	10/26/04	0.257
CVRWQCB	Bear Ck @ Hwy 20	12/01/04	0.143
CVRWQCB	Bear Ck @ Hwy 20	02/02/05	0.192
Foe & Croyle	Bear Ck u/s Cache Ck Confluence	07/12/01	0.82

CVRWQCB	Bear Ck u/s Cache Ck Confluence	12/29/03	0.342
CVRWQCB	Bear Ck u/s Cache Ck Confluence	02/03/04	0.273
CVRWQCB	Bear Ck u/s Cache Ck Confluence	03/24/04	0.176
CVRWQCB	Bear Ck u/s Cache Ck Confluence	04/28/04	0.0234
CVRWQCB	Bear Ck u/s Cache Ck Confluence	04/28/04	0.499
CVRWQCB	Bear Ck u/s Cache Ck Confluence	06/09/04	0.763
CVRWQCB	Bear Ck u/s Cache Ck Confluence	06/09/04	0.814
CVRWQCB	Bear Ck u/s Cache Ck Confluence	12/01/04	0.0695
CVRWQCB	Bear Ck u/s Cache Ck Confluence	12/01/04	0.0622
CVRWQCB	Bear Ck u/s Cache Ck Confluence	02/02/05	0.151
CVRWQCB	Bear Ck u/s Cache Ck Confluence	02/02/05	0.141
CALFED5B	Cache @ 505	03/16/00	0.151
CALFED5B	Cache @ 505	04/17/00	1.08
CALFED1C	Cache @ 505	06/13/00	0.27
CALFED5B	Cache @ 505	06/14/00	0.267
CALFED5B	Cache @ 505	08/10/00	0.1424
CALFED5B	Cache @ 505	10/11/00	0.188
CALFED5B	Cache @ 505	10/11/00	0.188
CALFED5B	Cache @ 505	11/07/00	0.072
CALFED5B	Cache @ 505	12/11/00	0.0878
CALFED5B	Cache @ 505	01/11/01	0.0885
CALFED5B	Cache @ 505	02/13/01	0.228
Yolo Co	Cache Ck - Solano Gravel	04/04/96	0.329
Yolo Co	Cache Ck - Solano Gravel	04/09/96	0.116
Yolo Co	Cache Ck - Solano Gravel	04/11/96	0.114
Yolo Co	Cache Ck - Solano Gravel	04/15/96	0.114
CVRWQCB	Cache Ck @ Anderson Marsh Entrance	08/25/04	0.123
CVRWQCB	Cache Ck @ Anderson Marsh Entrance	02/02/05	0.054
CALFED5B	Cache Ck @ Rumsey	01/31/00	0.783
CALFED1C	Cache Ck @ Rumsey	01/31/00	0.78
CALFED1C	Cache Ck @ Rumsey	02/28/00	0.127
CALFED5B	Cache Ck @ Rumsey	03/02/00	0.22
CALFED5B	Cache Ck @ Rumsey	03/16/00	0.104
CALFED1C	Cache Ck @ Rumsey	03/16/00	0.0694
CALFED5B	Cache Ck @ Rumsey	04/17/00	0.407
CALFED1C	Cache Ck @ Rumsey	06/13/00	0.2
CALFED5B	Cache Ck @ Rumsey	06/14/00	0.196
CALFED5B	Cache Ck @ Rumsey	08/10/00	0.231
CALFED5B	Cache Ck @ Rumsey	10/11/00	0.111
CALFED5B	Cache Ck @ Rumsey	11/07/00	0.0548
CALFED5B	Cache Ck @ Rumsey	12/11/00	0.03685
CALFED5B	Cache Ck @ Rumsey	01/11/01	0.0376
CALFED5B	Cache Ck @ Rumsey	02/13/01	0.284
CALFED5B	Cache Ck @ Rumsey	03/22/01	0.104
CALFED5B	Cache Ck @ Rumsey	05/03/01	0.295
CALFED5B	Cache Ck @ Rumsey	06/07/01	0.17
CVRWQCB	Cache Ck @ Rumsey	12/29/03	0.32
CVRWQCB	Cache Ck @ Rumsey	12/29/03	0.268
CVRWQCB	Cache Ck @ Rumsey	02/17/04	0.581
CVRWQCB	Cache Ck @ Rumsey	03/24/04	0.119
CVRWQCB	Cache Ck @ Rumsey	04/28/04	0.169
CVRWQCB	Cache Ck @ Rumsey	06/09/04	0.264
CVRWQCB	Cache Ck @ Rumsey	06/09/04	0.299
CVRWQCB	Cache Ck @ Rumsey	08/03/04	0.315
CVRWQCB	Cache Ck @ Rumsey	09/22/04	0.347

CVRWQCB	Cache Ck @ Rumsey	10/25/04	0.151
CVRWQCB	Cache Ck @ Rumsey	12/01/04	0.0488
CVRWQCB	Cache Ck @ Rumsey	02/03/05	0.0754
CCNP2	Cache Ck d/s Gordon Slough	09/26/01	0.22
CCNP4	Cache Ck d/s Gordon Slough	04/18/02	0.112
CCNP2	Cache Ck d/s Preserve	09/26/01	0.21
CCNP4	Cache Ck d/s Preserve	04/18/02	0.097
CVRWQCB	Cache Ck North Fork @ Hwy 20	08/03/04	0.136
CVRWQCB	Cache Ck North Fork @ Hwy 20	09/22/04	0.109
CVRWQCB	Cache Ck North Fork @ Hwy 20	10/26/04	0.0865
CVRWQCB	Cache Ck North Fork @ Hwy 20	12/01/04	0.087
CVRWQCB	Cache Ck North Fork @ South Fork Confluence	10/26/04	0.101
CVRWQCB	Cache Ck North Fork d/s IVR Dam	06/09/04	0.112
CVRWQCB	Cache Ck North Fork d/s IVR Dam	09/22/04	0.133
CVRWQCB	Cache Ck North Fork d/s IVR Dam	10/26/04	0.17
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	03/24/04	0.0875
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	04/28/04	0.093
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	09/22/04	0.0991
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	12/01/04	0.0532
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	02/02/05	0.0681
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	03/24/04	0.172
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	04/28/04	0.233
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	06/09/04	0.307
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	08/03/04	0.409
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	09/22/04	0.205
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	10/26/04	0.182
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	02/02/05	0.176
CVRWQCB	Cache Ck u/s Bear Ck Confluence	03/24/04	0.109
CVRWQCB	Cache Ck u/s Bear Ck Confluence	04/28/04	0.203
CVRWQCB	Cache Ck u/s Bear Ck Confluence	06/09/04	0.224
CVRWQCB	Cache Ck u/s Bear Ck Confluence	08/03/04	0.296
CVRWQCB	Cache Ck u/s Bear Ck Confluence	08/03/04	0.293
CVRWQCB	Cache Ck u/s Bear Ck Confluence	09/22/04	0.283
CVRWQCB	Cache Ck u/s Bear Ck Confluence	10/26/04	0.183
CVRWQCB	Cache Ck u/s Bear Ck Confluence	12/01/04	0.0709
CVRWQCB	Cache Ck u/s Bear Ck Confluence	02/02/05	0.0879
CCNP2	Cache Ck u/s Preserve	09/26/01	0.12
CCNP4	Cache Ck u/s Preserve	04/18/02	0.096
CVRWQCB	Cache Creek North Fork d/s IVR Dam	04/28/04	0.058
CCNP2	Cache Preserve Outflow	05/08/01	0.38
CCNP2	Cache Preserve Outflow	07/26/01	0.49
CCNP2	Cache Preserve Outflow	09/26/01	0.38
CCNP4	Cache Preserve Outflow	04/18/02	0.236
CALFED1C	CCSB Inflow	01/31/00	0.18
CALFED1C	CCSB Inflow	03/01/00	0.576
CALFED1C	CCSB Inflow	03/18/00	0.0877
CALFED1C	CCSB Inflow	06/13/00	0.26
CVRWQCB	CCSB Inflow	02/17/04	0.633
CVRWQCB	CCSB Inflow	03/24/04	0.153
CVRWQCB	CCSB Inflow	04/28/04	0.237
CVRWQCB	CCSB Inflow	06/09/04	0.263
CVRWQCB	CCSB Inflow	08/03/04	0.417
CVRWQCB	CCSB Inflow	09/22/04	0.311
CVRWQCB	CCSB Inflow	10/25/04	0.134
CVRWQCB	CCSB Inflow	12/01/04	0.083

CVRWQCB	CCSB Inflow	02/03/05	0.0816
CALFED1C	CCSB Outflow	03/01/00	0.443
CALFED1C	CCSB Outflow	03/18/00	0.204
CVRWQCB	CCSB Outflow	12/29/03	0.153
CVRWQCB	CCSB Outflow	02/17/04	0.621
CVRWQCB	CCSB Outflow	02/17/04	0.587
CVRWQCB	CCSB Outflow	03/24/04	0.378
CVRWQCB	CCSB Outflow	03/24/04	0.339
CVRWQCB	CCSB Outflow	04/28/04	0.317
CVRWQCB	CCSB Outflow	06/09/04	0.803
CVRWQCB	CCSB Outflow	08/03/04	0.498
CVRWQCB	CCSB Outflow	09/22/04	0.235
CVRWQCB	CCSB Outflow	10/25/04	0.181
CVRWQCB	CCSB Outflow	12/01/04	0.271
CVRWQCB	CCSB Outflow	02/03/05	0.366
CALFED1C	Clear Lake Outflow	01/31/00	0.11
CALFED5B	Clear Lake Outflow	01/31/00	0.111
CALFED1C	Clear Lake Outflow	02/29/00	0.128
CALFED5B	Clear Lake Outflow	03/02/00	0.145
CALFED1C	Clear Lake Outflow	03/17/00	0.0478
CALFED5B	Clear Lake Outflow	04/17/00	0.466
CALFED1C	Clear Lake Outflow	06/13/00	0.12
CALFED5B	Clear Lake Outflow	06/13/00	0.124
CALFED5B	Clear Lake Outflow	08/10/00	0.182
CALFED5B	Clear Lake Outflow	10/11/00	0.0267
CALFED5B	Clear Lake Outflow	11/07/00	0.02
CALFED5B	Clear Lake Outflow	12/11/00	0.0217
CALFED5B	Clear Lake Outflow	01/11/01	0.0513
CALFED5B	Clear Lake Outflow	02/13/01	0.0869
CALFED5B	Clear Lake Outflow	03/22/01	0.138
CALFED5B	Clear Lake Outflow	05/03/01	0.257
CALFED5B	Clear Lake Outflow	06/07/01	0.134
CVRWQCB	Clear Lake Outflow	02/17/04	0.297
CVRWQCB	Clear Lake Outflow	03/24/04	0.204
CVRWQCB	Clear Lake Outflow	04/28/04	0.24
CVRWQCB	Clear Lake Outflow	06/09/04	0.231
CVRWQCB	Clear Lake Outflow	08/03/04	0.336
CVRWQCB	Clear Lake Outflow	08/25/04	0.159
CVRWQCB	Clear Lake Outflow	08/25/04	0.122
CVRWQCB	Clear Lake Outflow	09/22/04	0.104
CVRWQCB	Clear Lake Outflow	10/25/04	0.225
CVRWQCB	Clear Lake Outflow	12/01/04	0.0379
CVRWQCB	South Fork Cache Ck d/s Clear Lake Dam	02/02/05	0.134
CALFED5B	Davis Ck d/s Reservoir	03/10/00	0.273
CALFED5B	Davis Ck d/s Reservoir	06/13/00	0.737
CALFED5B	Davis Ck d/s Reservoir	11/06/00	0.0218
CALFED5B	Davis Ck u/s Reservoir	06/13/00	0.361
CALFED5B	Davis Ck u/s Reservoir	08/10/00	0.242
CALFED5B	Davis Ck u/s Reservoir	11/06/00	0.108
CVRWQCB	Rathburn Mine Cks #3,4,5	12/01/04	2.42
CCNP2	Gordon Slough Inflow	05/08/01	0.35
CCNP2	Gordon Slough Inflow	07/26/01	0.2
CCNP2	Gordon Slough Inflow	09/26/01	0.17
CCNP4	Gordon Slough Inflow	04/18/02	0.182
CVRWQCB	Grizzly Ck	02/17/04	1.07

CVRWQCB	Harley Gulch East u/s Confluence	02/02/05	0.0251
CALFED1C	Harley Gulch @ Gage	01/31/00	0.98
CALFED5B	Harley Gulch @ Gage	01/31/00	0.983
CALFED5B	Harley Gulch @ Gage	02/14/00	0.354
CALFED5A	Harley Gulch @ Gage	02/14/00	0.354
CALFED1C	Harley Gulch @ Gage	02/27/00	0.0667
CALFED5B	Harley Gulch @ Gage	03/02/00	0.121
CALFED1C	Harley Gulch @ Gage	03/15/00	0.0894
CALFED5B	Harley Gulch @ Gage	04/17/00	0.453
CALFED1C	Harley Gulch @ Gage	06/13/00	7.76
CALFED5B	Harley Gulch @ Gage	06/13/00	7.76
CALFED5B	Harley Gulch @ Gage	01/11/01	1.088
CALFED5B	Harley Gulch @ Gage	02/13/01	0.662
CALFED5B	Harley Gulch @ Gage	05/03/01	8.555
CVRWQCB	Harley Gulch @ Gage	12/29/03	0.297
CVRWQCB	Harley Gulch @ Gage	02/16/04	1.24
CVRWQCB	Harley Gulch @ Gage	02/16/04	1.19
CVRWQCB	Harley Gulch @ Gage	02/17/04	0.444
CVRWQCB	Harley Gulch @ Gage	02/17/04	0.478
CVRWQCB	Harley Gulch @ Gage	03/24/04	0.199
CVRWQCB	Harley Gulch @ Gage	04/28/04	12.5
CVRWQCB	Harley Gulch @ Gage	04/28/04	6.91
CVRWQCB	Harley Gulch @ Gage	06/09/04	18
CVRWQCB	Harley Gulch @ Gage	08/03/04	0.641
CVRWQCB	Harley Gulch @ Gage	09/22/04	1.81
CVRWQCB	Harley Gulch @ Gage	10/25/04	3.66
CVRWQCB	Harley Gulch @ Gage	12/01/04	1.32
CVRWQCB	Harley Gulch @ Gage	12/01/04	1.01
CVRWQCB	Harley Gulch @ Gage	02/02/05	0.0639
CVRWQCB	Harley Gulch d/s Abbott Mine	04/28/04	0.189
CVRWQCB	Harley Gulch d/s Abbott Mine	06/09/04	1.43
CVRWQCB	Harley Gulch East	12/29/03	0.326
CVRWQCB	Harley Gulch East	02/16/04	0.791
CVRWQCB	Harley Gulch East	02/17/04	0.256
CVRWQCB	Harley Gulch East	03/24/04	0.0461
CVRWQCB	Harley Gulch East	04/28/04	0.0442
CVRWQCB	Harley Gulch East	06/09/04	2.08
CVRWQCB	Harley Gulch East	08/03/04	82.1
CVRWQCB	Harley Gulch East	09/22/04	1.33
CVRWQCB	Harley Gulch East	10/25/04	0.615
CVRWQCB	Harley Gulch East	12/01/04	0.444
CVRWQCB	Harley Gulch West	12/29/03	1.62
CVRWQCB	Harley Gulch West	12/29/03	1.68
CVRWQCB	Harley Gulch West	02/16/04	4.2
CVRWQCB	Harley Gulch West	02/17/04	1.18
CVRWQCB	Harley Gulch West	03/24/04	0.371
CVRWQCB	Harley Gulch West	04/28/04	5.41
CVRWQCB	Harley Gulch West	06/09/04	23.1
CVRWQCB	Harley Gulch West	08/03/04	DRY
CVRWQCB	Harley Gulch West d/s Wetland	09/22/04	0.26
CVRWQCB	Harley Gulch West d/s Wetland	10/25/04	0.26
CVRWQCB	Harley Gulch West d/s Wetland	12/01/04	0.0366
CVRWQCB	Harley Gulch West u/s Wetland	02/16/04	5.96
CVRWQCB	Harley Gulch West u/s Wetland	02/17/04	1.08
CVRWQCB	Harley Gulch West u/s Wetland	03/24/04	0.179

CVRWQCB	Harley Gulch West u/s Wetland	04/28/04	0.168
CVRWQCB	Harley Gulch West u/s Wetland	06/09/04	1.56
CVRWQCB	Harley Gulch West u/s Wetland	08/03/04	24
CVRWQCB	Harley Gulch West u/s Wetland	09/22/04	0.138
CVRWQCB	Harley Gulch West u/s Wetland	10/25/04	0.167
CVRWQCB	Harley Gulch West u/s Wetland	12/01/04	0.157
CVRWQCB	Harley Gulch West u/s Wetland	02/02/05	0.298
CVRWQCB	Harley Gulch West u/s Confluence	02/02/05	0.0795
CVRWQCB	Hog Hollow Ck	02/17/04	0.102
CVRWQCB	Long Valley	02/17/04	0.173
CALFED1C	North Fork (Upper)	02/29/00	0.0289
CALFED1C	North Fork (Upper)	03/17/00	<0.0230
Foe & Croyle	North Fork @ Hwy 20	01/31/00	0.169
CALFED1C	North Fork @ Hwy 20	01/31/00	0.17
CALFED1C	North Fork @ Hwy 20	02/27/00	0.0821
CALFED5B	North Fork @ Hwy 20	03/02/00	0.0672
CALFED5B	North Fork @ Hwy 20	03/16/00	0.05025
CALFED1C	North Fork @ Hwy 20	03/16/00	<0.0244
CALFED5B	North Fork @ Hwy 20	04/17/00	0.0229
CALFED5B	North Fork @ Hwy 20	06/13/00	0.0803
CALFED1C	North Fork @ Hwy 20	06/13/00	0.08
CALFED5B	North Fork @ Hwy 20	08/10/00	0.19
CALFED5B	North Fork @ Hwy 20	10/11/00	0.0374
CALFED5B	North Fork @ Hwy 20	11/07/00	0.02
CALFED5B	North Fork @ Hwy 20	12/11/00	0.0273
CALFED5B	North Fork @ Hwy 20	01/11/01	0.0636
CALFED5B	North Fork @ Hwy 20	03/22/01	0.0927
CALFED5B	North Fork @ Hwy 20	05/03/01	0.0723
CVRWQCB	North Fork @ Hwy 20	12/29/03	0.347
CVRWQCB	North Fork @ Hwy 20	02/17/04	0.442
CVRWQCB	North Fork @ Hwy 20	03/24/04	0.0491
CVRWQCB	North Fork @ Hwy 20	04/28/04	0.07
CVRWQCB	North Fork @ Hwy 20	06/09/04	0.0927
CVRWQCB	Cache Ck North Fork @ Hwy 20	02/02/05	0.0461
CVRWQCB	North Fork Cache Ck d/s IVR Dam	08/03/04	0.172
CVRWQCB	North Fork Cache Ck u/s South Fork Confluence	06/09/04	0.0929
CVRWQCB	North Fork Cache u/s Wolf Ck	02/17/04	0.163
CVRWQCB	North Fork Cache u/s Wolf Ck	03/24/04	0.0995
CVRWQCB	North Fork Cache u/s Wolf Ck	04/28/04	0.069
CVRWQCB	North Fork Cache u/s Wolf Ck	06/09/04	0.089
CVRWQCB	North Fork Confluence	08/03/04	0.101
CVRWQCB	North Fork d/s IVR Dam	03/24/04	0.0612
CVRWQCB	Cache Ck North Fork d/s IVR Dam	02/02/05	0.106
CVRWQCB	Ponded area by mine cks	08/03/04	1.41
CVRWQCB	Siegler Ck	12/01/04	0.0588
CVRWQCB	South Fork Cache Ck d/s Clear Lake Dam	02/02/05	0.135
CVRWQCB	Sulphur Ck	12/01/04	1.22
CALFED5B	Sulphur Ck @ Gage	01/31/00	2.46
CalFED1C	Sulphur Ck @ Gage	01/31/00	2.46
CALFED5B	Sulphur Ck @ Gage	02/14/00	0.481
CALFED5A	Sulphur Ck @ Gage	02/14/00	0.481
CalFED1C	Sulphur Ck @ Gage	02/27/00	0.334
CALFED5B	Sulphur Ck @ Gage	03/02/00	0.2195
CalFED1C	Sulphur Ck @ Gage	03/15/00	0.0611
CALFED5B	Sulphur Ck @ Gage	04/17/00	0.659

CalFED1C	Sulphur Ck @ Gage	06/13/00	0.76
CALFED5B	Sulphur Ck @ Gage	06/14/00	0.7645
CALFED5B	Sulphur Ck @ Gage	08/10/00	4.04
CALFED5B	Sulphur Ck @ Gage	10/11/00	1.57
CALFED5B	Sulphur Ck @ Gage	11/07/00	1.3
CALFED5B	Sulphur Ck @ Gage	01/11/01	0.92
CALFED5B	Sulphur Ck @ Gage	02/13/01	0.405
CALFED5A	Sulphur Ck @ Gage	02/22/01	0.489
CALFED5B	Sulphur Ck @ Gage	05/03/01	0.149
CALFED5B	Sulphur Ck @ Gage	07/12/01	18.2
CALFED5B	Sulphur Ck @ Gage	08/23/01	20.6
CVRWQCB	Sulphur Ck @ Gage	12/14/03	0.17
CVRWQCB	Sulphur Ck @ Gage	12/29/03	0.951
CVRWQCB	Sulphur Ck @ Gage	02/03/04	0.277
CVRWQCB	Sulphur Ck @ Gage	02/16/04	3.05
CVRWQCB	Sulphur Ck @ Gage	02/16/04	2.54
CVRWQCB	Sulphur Ck @ Gage	02/17/04	1.1
CVRWQCB	Sulphur Ck @ Gage	02/25/04	1.93
CVRWQCB	Sulphur Ck @ Gage	02/25/04	1.74
CVRWQCB	Sulphur Ck @ Gage	03/24/04	0.175
CVRWQCB	Sulphur Ck @ Gage	04/28/04	0.441
CVRWQCB	Sulphur Ck @ Gage	08/03/04	3.36
CALFED5B	Upper Bear Ck	03/02/00	0.103
CALFED5B	Upper Bear Ck	06/14/00	0.212
CALFED5B	Upper Bear Ck	10/11/00	0.0868
CALFED5B	Upper Bear Ck	11/07/00	0.0534
CALFED5B	Upper Bear Ck	12/11/00	0.0669
CALFED5B	Upper Bear Ck	01/11/01	0.177
CALFED5B	Upper Bear Ck	02/13/01	0.0501
CALFED5B	Upper Bear Ck	03/22/01	0.0676
CALFED5B	Upper Bear Ck	05/03/01	0.0636
CALFED5B	Upper Bear Ck	06/07/01	0.228
CALFED5B	Upper Bear Ck	07/12/01	0.295
CALFED5B	Upper Bear Ck	08/23/01	0.09
CVRWQCB	Wolf Ck	02/17/04	0.0926
CALFED5B	Yolo	01/31/00	0.181
CALFED5B	Yolo	03/02/00	0.348
CALFED5B	Yolo	04/17/00	0.51
CALFED5B	Yolo	06/14/00	0.256
CALFED5B	Yolo	08/10/00	0.476
CALFED5B	Yolo	10/11/00	0.178
CALFED5B	Yolo	11/07/00	0.0914
CVRWQCB	Harley Gulch West u/s Wetland	03/02/05	0.255
CVRWQCB	Harley Gulch East	03/02/05	0.0649
CVRWQCB	Harley Gulch West	03/02/05	0.142
CVRWQCB	Harley Gulch @ Gage	03/02/05	0.115
CVRWQCB	CCSB Inflow	03/02/05	0.175
CVRWQCB	Cache Ck @ Rumsey	03/29/05	0.0488
CVRWQCB	Clear Lake Outflow	03/02/05	0.0736
CVRWQCB	Cache Ck North Fork d/s Indian Valley Reservoir	03/01/05	0.139
CVRWQCB	Cache Ck North Fork @ Hwy 20	03/01/05	0.11
CVRWQCB	Cache Ck South Fork u/s North Fork Confluence	03/01/05	0.131
CVRWQCB	Cache Ck North Fork u/s South Fork Confluence	03/01/05	0.0675
CVRWQCB	Bear Ck @ Brim Rd	03/01/05	0.0919
CVRWQCB	Bear Ck @ Bear Valley Rd	03/01/05	0.0682

CVRWQCB	Sulphur Ck u/s Bear Ck Confluence	03/01/05	0.139
CVRWQCB	Bear Ck u/s Sulphur Ck Confluence	03/01/05	0.123
CVRWQCB	Bear Ck @ Hwy 20	03/01/05	0.275
CVRWQCB	Bear Ck u/s Cache Ck Confluence	03/01/05	0.208
CVRWQCB	Cache Ck u/s Bear Ck Confluence	03/01/05	0.109
CVRWQCB	Rumsey	03/01/05	0.177
CVRWQCB	CCSB Outflow	03/01/05	0.299
CVRWQCB	CCSB Outflow	03/16/05	0.159
CVRWQCB	CCSB Outflow	03/16/05	0.138

Appendix H. Revised Methylmercury Load Allocations for Cache and Bear Creeks

The proposed amendment for Chapter 4 of the Basin Plan contains load allocations for methylmercury in Cache and Bear Creeks and their tributaries and stream sections.

These load allocations incorporate revisions of the allocations originally published in the Cache Creek, Bear Creek and Harley Gulch TMDL for Mercury report. Section 6 of the TMDL report contained an explanation and tables for calculation of the methylmercury load allocations. The revised allocations were calculated using the same methodology as described in the TMDL report with the following changes:

1. In the revised calculations, the aqueous methylmercury goals are defined as annual average concentrations and are compared with existing average concentrations. In the original calculations, both were median values. Using the average for the goals and existing conditions is more appropriate than using the median, because the linkage analysis relationships were developed using average concentrations of methylmercury in water and fish tissue. The aqueous methylmercury goals are derived directly from the linkage relationships (Figures 5.1 and 5.2 of this report).
2. The set of methylmercury concentration data includes data collected up to February 2005. This data is provided in another appendix.

The following tables replace Tables 6.1, 6.2, 6.3, and 6.4 of the Cache Creek TMDL report. Please refer to the TMDL report for an explanation of the 2-step process for calculating load allocations.

TMDL Table 6.1 (revised) Reductions in Aqueous Methylmercury Concentrations to Meet Numeric Objectives in Cache Creek

Tributary	Existing average MeHg, ng/L	Aqueous MeHg goal, as average, ng/L	Reduction needed to meet goal, as % of existing concentration
SF	0.17	0.14	18
NF	0.1	0.14	-40
Harley	2.5	0.09	96
Bear	0.44	0.06	86
Cache @ Yolo	0.26	0.14	46
Cache@ SB outflow	0.35	0.14	60

Table 6.2 revise. Allocation of Methylmercury Loads to Cache Creek

	Existing loads, g/yr	Allocation (as percent)	Future load g/yr
Cache u/s NF confluence	36.8	30	11.0
NF	12.4	100	12.4
Harley	1	4	0.0
Davis C	1.3	50	0.7
Bear	21.1	14	3.0
net in channel	49.5	65	32.0
MOS (10% of future loads)			7
Cache @ Yolo	122.1	54	66
Settling Basin	86.8	40	34.72

TMDL Table 6.3 (revised) Reductions in Aqueous Methylmercury Concentrations to Meet Numeric Objectives in Bear Creek

	Existing average MeHg, ng/L	Aqueous MeHg goal as average, ng/L	Reduction, as % existing avg concentration
Bear Creek @BV Rd	0.12	0.06	50
Bear Creek at gauge	0.44	0.06	86

TMDL Table 6.4 (revised) Allocation of Methylmercury Loads to Bear Creek

	Existing load, g/yr	Load Allocation, as% existing loads	Acceptable Load based on 2000 loads, g/yr
Bear Creek @BV Rd	1.7	50	0.85
Sulphur Creek	8	10	0.8
net in channel	11.4	10	1.14
MOS (10% of future loads)			0.3
Bear Creek at gauge	21.1	15	3.16